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"WEIGHT AND TYPE 2 DIABETES AFTER BARIATRIC SURGERY:

SYSTEMATIC REVIEW AND META-ANALYSIS"

Lead Author: Henry Buchwald, MD, PhD, University of Minnesota

OVERVIEW

- Published in *The American Journal of Medicine* in March 2009
- Study demonstrates bariatric surgery can effectively improve (78.1%) or resolve (86.6%) Type 2 diabetes in people with morbidly obesity
- Relationship of diabetes resolution/improvement and weight loss was analyzed from 621 studies from January 1990 to April 2006 involving 135,246 patients who had laparoscopic adjustable gastric banding, gastroplasty, gastric bypass, and biliopancreatic diversion/duodenal switch
 - Ages ranged from 16 to 65: mean age was 40
 - Mean BMI nearly 48
 - 80% were female; approximately 10.5% had previous bariatric surgical procedures
 - Of the overall population, 22.3% had Type 2 diabetes

STUDY FINDINGS

- Diabetes resolution was most pronounced for patients undergoing biliopancreatic, diversion/duodenal switch (95.1%), followed by gastric bypass (80.3%) gastroplasty (79.7%) and then gastric banding (56.7%)
- 80% of patients had resolution of diabetes in the first two years after surgery and 75% remained free of diabetes more than two years after surgery
- Postoperative insulin levels, HgA1c and fasting glucose values decreased significantly
- Total excess weight loss (EWL) for at least half of the study patients was 59% EWL at two years or more follow-up

COMMENTARY

- *"Findings from this study make a strong statement about the remarkable effect bariatric surgery has on the resolution of Type 2 diabetes, and could one day lead to a cure for the disease."*
- *"Resolution or improvement of Type 2 diabetes appears more pronounced in procedures associated with a greater percentage of excess body weight loss that is maintained for two years or more."*
- "Clinical trials comparing surgery and medical therapies for Type 2 diabetes are urgently needed, considering that 90 % of all patients with Type 2 diabetes are overweight or obese."

-- Henry Buchwald, MD, PhD, University of Minnesota